

## CLAIMS

What is claimed is:

1. A flue liner insert comprising four individual components of sheet material, each component  
5 having a cross section that is generally L-shaped with an altered corner, the components  
together forming a vertical flue passage, each component comprising adjustable fastening means  
such that each component is independently adjustable in position with respect to the other  
components.
2. The flue liner insert of claim 1, wherein the flue liner insert further comprises one or more  
10 placement tabs extending at a predetermined height of the flue liner insert.
3. The flue liner insert of claim 2, wherein the upper portion of the flue liner insert has at least one  
ventilation hole therein.
4. A method of using a flue liner insert of claim 3 to extend and terminate a chimney having an  
existing flue tile at its top, comprising:  
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  - a) Inserting the flue liner insert into the existing flue tile at a depth predetermined by the  
location of a placement tab; and
  - b) Attaching a chimney cap to the upper end of the flue liner insert.
5. A method of using a flue liner insert of claim 2 to extend a chimney having an existing flue tile  
at its top, comprising:  
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  - a) Inserting the flue liner insert into the existing flue tile at a depth predetermined by the  
location of a placement tab; and
  - b) Placing an extending flue tile over the flue liner insert such that it is directly or indirectly  
supported by the existing flue tile.
6. The flue liner insert of claim 1, wherein the adjustable fastening means comprises adjustment  
25 slots in the individual components, threaded studs passing through a plurality of the adjustment  
slots, and a nut on each of the threaded studs for fastening the components.

7. The flue liner insert of claim 1, having threaded holes therein adapted to accommodate bolts that can exert force against the inner wall of a flue tile.
8. A method of using a flue liner insert of claim 1 to extend a chimney having an existing flue tile at its top, comprising:
- 5       a) Inserting the flue liner insert into an existing flue tile;
- b) Placing a metal shroud around the exterior of the flue liner insert; and
- c) Fastening the metal shroud to the flue liner insert.
9. The method of claim 8, wherein the flue liner insert has one or more threaded holes and the metal shroud has one or more holes positioned to correspond to the threaded holes through the
- 10       flue liner insert , and step c) comprises:
- i)    Passing a threaded bolt through a threaded hole in the flue liner insert and through the corresponding hole in the metal shroud; and
- ii)   Securing the metal shroud to the flue liner insert by a nut on the threaded bolt.
10. A method of using a flue liner insert of claim 1 to extend a chimney having an existing flue tile at its top, comprising:
- 15       a) Inserting the flue liner insert into an existing flue tile; and
- b) Placing a chimney pot over the flue liner insert.
11. The method of claim 10, wherein the flue liner insert has threaded holes therethrough, further comprising:
- 20       c) Threading bolts through threaded holes in the flue liner insert to make contact with and exert force against the chimney pot, thereby securing the chimney pot over the flue liner insert.
12. A method of using a flue liner insert of claim 1 to extend a chimney having an existing flue tile at its top, comprising:

- a) Inserting the flue liner insert into an existing flue tile;
- b) Placing a metal shroud around the exterior of the flue liner insert;
- c) Inserting an insulating material between the exterior of the flue liner and the interior of the metal shroud; and
- 5      d) Fastening the metal shroud to the flue liner insert.

13. The flue liner insert of claim 1, wherein the altered corner is a beveled corner.

14. The flue liner insert of claim 1, wherein the altered corner is an inverted corner.

15. The flue liner insert of claim 1, wherein the altered corner is an outwardly rounded corner.

16. The flue liner insert of claim 1, wherein the altered corner is an inwardly rounded corner.

10    17. The flue liner insert of claim 1, further comprising an adjustable expansion mechanism.